0579
2013

#4

OIPE

RAW SEQUENCE LISTING DATE: 05/16/2002
PATENT APPLICATION: US/10/024,368 TIME: 14:13:08

Input Set : N:\Crf3\RULE60\10024368.raw
Output Set: N:\CRF3\05162002\J024368.raw

1 <110> APPLICANT: THOMPSON, Catherine C.
2 <120> TITLE OF INVENTION: HUMAN HAIRLESS GENE AND PROTEIN
3 <130> FILE REFERENCE: Thompson-20263/0243435
4 <140> CURRENT APPLICATION NUMBER: 10/024,368
5 <141> CURRENT FILING DATE: 2001-12-21
7 <150> PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US/09/287,354
W--> 8 **<151> PRIOR FILING DATE: EARLIER FILING DATE: 1999-04-07**
11 <150> PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US 60/080,888
W--> 12 **<151> PRIOR FILING DATE: EARLIER FILING DATE: 1998-04-07**
13 <160> NUMBER OF SEQ ID NOS: 10
14 <170> SOFTWARE: PatentIn Ver. 2.0
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 3202
18 <212> TYPE: DNA
19 <213> ORGANISM: Homo sapiens
20 <400> SEQUENCE: 1

ENTERED

21 ttttactaca aggatccgag cattcccagg ttggcaaagg agcccttggc agctgcggaa 60
22 cctgggttgt ttggcttaaa ctctggtggg cacctgcaga gagccgggga ggccgaacgc 120
23 ccttcactgc accagaggga tggagagatg ggagctggcc ggcagcagaa tccttgcccg 180
24 ctcttcctgg ggcagccaga cactgtgccc tggacctcct ggcccgcttg tcccccaggc 240
25 cttgttcata ctcttggcaa cgtctgggct gggccaggcg atgggaacct tgggtaccag 300
26 ctggggccac cagcaacacc aaggtgcccc tctcctgagc cgcctgtcac ccagcggggc 360
27 tgctgttcat cctacccacc cactaaaggt ggggatcttg gcccttgtgg gaagtgccag 420
28 gagggcctgg agggggtgc cagtggagcc agcgaaccca gcgaggaagt gaacaaggcc 480
29 tctggcccca gggcctgtcc ccccagccac cacaccaagc tgaagaagac atggctcaca 540
30 cggcactcgg agcagtttga atgtccacgc ggctgccctg aggtcgagga gaggccggtt 600
31 gctcggctcc gggccctcaa aagggcaggc agccccgagg tccagggagc aatgggcagt 660
32 ccagccccca agcggccacc ggacccttc ccaggcactg cagaacaggg ggctgggggt 720
33 tggcaggagg ttcgggacac atcgataggg aacaaggatg tggactcggg acagcatgat 780
34 gagcagaaag gaccccaaga tggccaggcc agtctccagg acccgggact tcaggacata 840
35 ccatgcctgc ttctccctgc aaaactggct caatgccaaa gttgtgccca ggcagctgga 900
36 gagggaggag ggcacgcctg ccactctcag caagtgcgga gatcgcctct gggaggggag 960
37 ctgcagcagg aggaagacac agccaccaac tccagctctg aggaaggccc agggtccggc 1020
38 cctgacagcc ggctcagcac aggcctcgcc aagcacctgc tcagtggttt gggggaccga 1080
39 ctgtgccgcc tgctgcggag ggagcgggag gccctggctt gggcccagcg ggaaggccaa 1140
40 gggccagccg tgacagggga cagcccaggc attccacgct gctgcagccg ttgccaccat 1200
41 ggactcttca acacccactg gcgatgtccc cgctgcagcc accggctgtg tgtggcctgt 1260
42 ggtcgtgtgg caggcactgg gcgggccagg gagaaagcag gctttcagga gcagtccgcg 1320
43 gaggagtgca cgcaggaggc cgggcacgct gcctgttccc tgatgctgac ccagtttgtc 1380
44 tccagccagg ctttggcaga gctgagcact gcaatgcacc aggtctgggt caagtttgat 1440
45 atccgggggc actgcccctg ccaagctgat gcccgggtat gggcccccgg ggatgcaggc 1500
46 cagcagaagg aatcaacaca gaaaacgccc ccaactccac aaccttcctg caatggcgac 1560
47 acccacagga ccaagagcat caaagaggag acccccgatt ccgctgagac cccagcagag 1620

RAW SEQUENCE LISTING DATE: 05/16/2002
PATENT APPLICATION: US/10/024,368 TIME: 14:13:08

Input Set : N:\Crf3\RULE60\10024368.raw
Output Set: N:\CRF3\05162002\J024368.raw

gaccgtgctg gccgagggcc cctgccttgt ccttctctct gcgaactgct ggcttctacc 1680
gcggtcaaac tctgcttggg ccatgagcga atacacatgg ccttcgcccc cgtcactccg 1740
gccctgccca gtgatgaccg catcaccaac atcctggaca gcattatcgc acaggtggtg 1800
gaacggaaga tccaggagaa agccctgggg ccggggcttc gagctggccc gggtctgcgc 1860
aagggcctgg gcctgcccct ctctccagtg cggccccggc tgcctccccc aggggctttg 1920
ctgtggctgc aggagcccca gccttgccct cggcgtggct tccacctctt ccaggagcac 1980
tggaggcagg gccagcctgt gttggtgtca gggatccaaa ggacattgca gggcaacctg 2040
tgggggacag aagctcttgg ggcacttgga ggccaggtgc aggcgctgag ccccctcgga 2100
cctccccagc ccagcagcct gggcagcaca acattctggg agggcttctc ctggcctgag 2160
cttcgcccaa agtcagacga gggctctgtc ctcctgctgc accgagcttt gggggatgag 2220
gacaccagca gggtggagaa cctagctgcc agtctgccac ttccggagta ctgcgccctc 2280
catggaaaac tcaacctggc ttcctacctc ccaccgggcc ttgccctgcg tccactggag 2340
ccccagctct gggcagccta tggtgtgagc ccgcaccggg gacacctggg gaccaagaac 2400
ctctgtgtgg aggtggccga cctggtcagc atcctggtgc atgccgacac accactgcct 2460
gcctggcacc gggcacagaa agacttcctt tcaggcctgg acggggaggg gctctggtct 2520
ccgggcagcc aggtcagcac tgtgtggcac gtgttccggg cacaggacgc ccagcgcatc 2580
cgccgctttc tccagatggt gtgcccggcc ggggcaggcg ccctggagcc tggcgcccca 2640
ggcagctgct acctggatgc agggctgcgg cggcgcctgc gggaggagtg gggcgtgagc 2700
tgctggaccc tgctccaggc ccccggagag gccgtgctgg tgcctgcagg ggctccccac 2760
caggtgcagg gcctggtgag cacagtcagc gtcactcagc acttcctctc ccctgagacc 2820
tctgccctct ctgctcagct ctgccaccag ggacccagcc ttccccctga ctgccacctg 2880
ctttatgccc agatggactg ggctgtgttc caagcagtga aggtggccgt ggggacatta 2940
caggaggcca aatagaggga tgctaggtgt ctgggatcgg ggtggggaca ggtagaccag 3000
gtgctcagcc caggcacaac ttcagcaggg gatggcgcta ggggacttgg ggatttctgg 3060
tcaaccccac aagcaccact ctgggcacaa gcagggcact ctgttccct ccccttaag 3120
ccaacaacca cagtgccacc aagctcacac ctgtccttct caggctggca tctcccccac 3180
cctgtgccct tttatgtaca gg 3202

<210> SEQ ID NO: 2
<211> LENGTH: 984
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 2

Phe Tyr Tyr Lys Asp Pro Ser Ile Pro Arg Leu Ala Lys Glu Pro Leu
1 5 10 15
Ala Ala Ala Glu Pro Gly Leu Phe Gly Leu Asn Ser Gly Gly His Leu
20 25 30
Gln Arg Ala Gly Glu Ala Glu Arg Pro Ser Leu His Gln Arg Asp Gly
35 40 45
Glu Met Gly Ala Gly Arg Gln Gln Asn Pro Cys Pro Leu Phe Leu Gly
50 55 60
Gln Pro Asp Thr Val Pro Trp Thr Ser Trp Pro Ala Cys Pro Pro Gly
65 70 75 80
Leu Val His Thr Leu Gly Asn Val Trp Ala Gly Pro Gly Asp Gly Asn
85 90 95
Leu Gly Tyr Gln Leu Gly Pro Pro Ala Thr Pro Arg Cys Pro Ser Pro
100 105 110
Glu Pro Pro Val Thr Gln Arg Gly Cys Cys Ser Ser Tyr Pro Pro Thr
115 120 125
Lys Gly Gly Asp Leu Gly Pro Cys Gly Lys Cys Gln Glu Gly Leu Glu

RAW SEQUENCE LISTING DATE: 05/16/2002
PATENT APPLICATION: US/10/024,368 TIME: 14:13:08

Input Set : N:\Crf3\RULE60\10024368.raw
Output Set: N:\CRF3\05162002\J024368.raw

```
98          130                 135                 140
99      Gly Gly Ala Ser Gly Ala Ser Glu Pro Ser Glu Glu Val Asn Lys Ala
100      145                 150                 155                 160
101      Ser Gly Pro Arg Ala Cys Pro Pro Ser His His Thr Lys Leu Lys Lys
102                      165                 170                 175
103      Thr Trp Leu Thr Arg His Ser Glu Gln Phe Glu Cys Pro Arg Gly Cys
104                  180                 185                 190
105      Pro Glu Val Glu Glu Arg Pro Val Ala Arg Leu Arg Ala Leu Lys Arg
106              195                 200                 205
107      Ala Gly Ser Pro Glu Val Gln Gly Ala Met Gly Ser Pro Ala Pro Lys
108          210                 215                 220
109      Arg Pro Pro Asp Pro Phe Pro Gly Thr Ala Glu Gln Gly Ala Gly Gly
110      225                 230                 235                 240
111      Trp Gln Glu Val Arg Asp Thr Ser Ile Gly Asn Lys Asp Val Asp Ser
112                      245                 250                 255
113      Gly Gln His Asp Glu Gln Lys Gly Pro Gln Asp Gly Gln Ala Ser Leu
114                  260                 265                 270
115      Gln Asp Pro Gly Leu Gln Asp Ile Pro Cys Leu Ala Leu Pro Ala Lys
116              275                 280                 285
117      Leu Ala Gln Cys Gln Ser Cys Ala Gln Ala Ala Gly Glu Gly Gly Gly
118          290                 295                 300
119      His Ala Cys His Ser Gln Gln Val Arg Arg Ser Pro Leu Gly Gly Glu
120      305                 310                 315                 320
121      Leu Gln Gln Glu Glu Asp Thr Ala Thr Asn Ser Ser Ser Glu Glu Gly
122                      325                 330                 335
123      Pro Gly Ser Gly Pro Asp Ser Arg Leu Ser Thr Gly Leu Ala Lys His
124                  340                 345                 350
125      Leu Leu Ser Gly Leu Gly Asp Arg Leu Cys Arg Leu Leu Arg Arg Glu
126              355                 360                 365
127      Arg Glu Ala Leu Ala Trp Ala Gln Arg Glu Gly Gln Gly Pro Ala Val
128          370                 375                 380
129      Thr Gly Asp Ser Pro Gly Ile Pro Arg Cys Cys Ser Arg Cys His His
130      385                 390                 395                 400
131      Gly Leu Phe Asn Thr His Trp Arg Cys Pro Arg Cys Ser His Arg Leu
132                      405                 410                 415
133      Cys Val Ala Cys Gly Arg Val Ala Gly Thr Gly Arg Ala Arg Glu Lys
134                  420                 425                 430
135      Ala Gly Phe Gln Glu Gln Ser Ala Glu Glu Cys Thr Gln Glu Ala Gly
136              435                 440                 445
137      His Ala Ala Cys Ser Leu Met Leu Thr Gln Phe Val Ser Ser Gln Ala
138          450                 455                 460
139      Leu Ala Glu Leu Ser Thr Ala Met His Gln Val Trp Val Lys Phe Asp
140      465                 470                 475                 480
141      Ile Arg Gly His Cys Pro Cys Gln Ala Asp Ala Arg Val Trp Ala Pro
142                      485                 490                 495
143      Gly Asp Ala Gly Gln Gln Lys Glu Ser Thr Gln Lys Thr Pro Pro Thr
144                  500                 505                 510
145      Pro Gln Pro Ser Cys Asn Gly Asp Thr His Arg Thr Lys Ser Ile Lys
146              515                 520                 525
```

RAW SEQUENCE LISTING DATE: 05/16/2002
PATENT APPLICATION: US/10/024,368 TIME: 14:13:08

Input Set : N:\Crf3\RULE60\10024368.raw
Output Set: N:\CRF3\05162002\J024368.raw

```
147  Glu Glu Thr Pro Asp Ser Ala Glu Thr Pro Ala Glu Asp Arg Ala Gly
148      530                 535                 540
149  Arg Gly Pro Leu Pro Cys Pro Ser Leu Cys Glu Leu Leu Ala Ser Thr
150  545                 550                 555                 560
151  Ala Val Lys Leu Cys Leu Gly His Glu Arg Ile His Met Ala Phe Ala
152                  565                 570                 575
153  Pro Val Thr Pro Ala Leu Pro Ser Asp Asp Arg Ile Thr Asn Ile Leu
154              580                 585                 590
155  Asp Ser Ile Ile Ala Gln Val Val Glu Arg Lys Ile Gln Glu Lys Ala
156          595                 600                 605
157  Leu Gly Pro Gly Leu Arg Ala Gly Pro Gly Leu Arg Lys Gly Leu Gly
158      610                 615                 620
159  Leu Pro Leu Ser Pro Val Arg Pro Arg Leu Pro Pro Pro Gly Ala Leu
160  625                 630                 635                 640
161  Leu Trp Leu Gln Glu Pro Gln Pro Cys Pro Arg Arg Gly Phe His Leu
162                  645                 650                 655
163  Phe Gln Glu His Trp Arg Gln Gly Gln Pro Val Leu Val Ser Gly Ile
164              660                 665                 670
165  Gln Arg Thr Leu Gln Gly Asn Leu Trp Gly Thr Glu Ala Leu Gly Ala
166          675                 680                 685
167  Leu Gly Gly Gln Val Gln Ala Leu Ser Pro Leu Gly Pro Pro Gln Pro
168      690                 695                 700
169  Ser Ser Leu Gly Ser Thr Thr Phe Trp Glu Gly Phe Ser Trp Pro Glu
170  705                 710                 715                 720
171  Leu Arg Pro Lys Ser Asp Glu Gly Ser Val Leu Leu Leu His Arg Ala
172                  725                 730                 735
173  Leu Gly Asp Glu Asp Thr Ser Arg Val Glu Asn Leu Ala Ala Ser Leu
174              740                 745                 750
175  Pro Leu Pro Glu Tyr Cys Ala Leu His Gly Lys Leu Asn Leu Ala Ser
176          755                 760                 765
177  Tyr Leu Pro Pro Gly Leu Ala Leu Arg Pro Leu Glu Pro Gln Leu Trp
178      770                 775                 780
179  Ala Ala Tyr Gly Val Ser Pro His Arg Gly His Leu Gly Thr Lys Asn
180  785                 790                 795                 800
181  Leu Cys Val Glu Val Ala Asp Leu Val Ser Ile Leu Val His Ala Asp
182                  805                 810                 815
183  Thr Pro Leu Pro Ala Trp His Arg Ala Gln Lys Asp Phe Leu Ser Gly
184              820                 825                 830
185  Leu Asp Gly Glu Gly Leu Trp Ser Pro Gly Ser Gln Val Ser Thr Val
186          835                 840                 845
187  Trp His Val Phe Arg Ala Gln Asp Ala Gln Arg Ile Arg Arg Phe Leu
188      850                 855                 860
189  Gln Met Val Cys Pro Ala Gly Ala Gly Ala Leu Glu Pro Gly Ala Pro
190  865                 870                 875                 880
191  Gly Ser Cys Tyr Leu Asp Ala Gly Leu Arg Arg Arg Leu Arg Glu Glu
192                  885                 890                 895
193  Trp Gly Val Ser Cys Trp Thr Leu Leu Gln Ala Pro Gly Glu Ala Val
194              900                 905                 910
195  Leu Val Pro Ala Gly Ala Pro His Gln Val Gln Gly Leu Val Ser Thr
```

RAW SEQUENCE LISTING DATE: 05/16/2002
PATENT APPLICATION: US/10/024,368 TIME: 14:13:08

Input Set : N:\Crf3\RULE60\10024368.raw
Output Set: N:\CRF3\05162002\J024368.raw

915 920 925
Val Ser Val Thr Gln His Phe Leu Ser Pro Glu Thr Ser Ala Leu Ser
930 935 940
Ala Gln Leu Cys His Gln Gly Pro Ser Leu Pro Pro Asp Cys His Leu
945 950 955 960
Leu Tyr Ala Gln Met Asp Trp Ala Val Phe Gln Ala Val Lys Val Ala
965 970 975
Val Gly Thr Leu Gln Glu Ala Lys
980

<210> SEQ ID NO: 3
<211> LENGTH: 1189
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 3
Met Glu Ser Thr Pro Ser Phe Leu Lys Gly Thr Pro Thr Trp Glu Lys
1 5 10 15
Thr Ala Pro Glu Asn Gly Ile Val Arg Gln Glu Pro Gly Ser Pro Pro
20 25 30
Arg Asp Gly Leu His His Gly Pro Leu Cys Leu Gly Glu Pro Ala Pro
35 40 45
Phe Trp Arg Gly Val Leu Ser Thr Pro Asp Ser Trp Leu Pro Pro Gly
50 55 60
Phe Pro Gln Gly Pro Lys Asp Met Leu Pro Leu Val Glu Gly Glu Gly
65 70 75 80
Pro Gln Asn Gly Glu Arg Lys Val Asn Trp Leu Gly Ser Lys Glu Gly
85 90 95
Leu Arg Trp Lys Glu Ala Met Leu Thr His Pro Leu Ala Phe Cys Gly
100 105 110
Pro Ala Cys Pro Pro Arg Cys Gly Pro Leu Met Pro Glu His Ser Gly
115 120 125
Gly His Leu Lys Ser Asp Pro Val Ala Phe Arg Pro Trp His Cys Pro
130 135 140
Phe Leu Leu Glu Thr Lys Ile Leu Glu Arg Ala Pro Phe Trp Val Pro
145 150 155 160
Thr Cys Leu Pro Pro Tyr Leu Val Ser Gly Leu Pro Pro Glu His Pro
165 170 175
Cys Asp Trp Pro Leu Thr Pro His Pro Trp Val Tyr Ser Gly Gly Gln
180 185 190
Pro Lys Val Pro Ser Ala Phe Ser Leu Gly Ser Lys Gly Phe Tyr Tyr
195 200 205
Lys Asp Pro Ser Ile Pro Arg Leu Ala Lys Glu Pro Leu Ala Ala Ala
210 215 220
Glu Pro Gly Leu Phe Gly Leu Asn Ser Gly Gly His Leu Gln Arg Ala
225 230 235 240
Gly Glu Ala Glu Arg Pro Ser Leu His Gln Arg Asp Gly Glu Met Gly
245 250 255
Ala Gly Arg Gln Gln Asn Pro Cys Pro Leu Phe Leu Gly Gln Pro Asp
260 265 270
Thr Val Pro Trp Thr Ser Trp Pro Ala Cys Pro Pro Gly Leu Val His

VERIFICATION SUMMARY DATE: 05/16/2002
PATENT APPLICATION: US/10/024,368 TIME: 14:13:09

Input Set : N:\Crf3\RULE60\10024368.raw
Output Set: N:\CRF3\05162002\J024368.raw

L:8 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD
L:12 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD